

## PATENT SPECIFICATION

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COMPLETE SPECIFICATION.



## Improvements in Electric Time Fuses for use in Blasting.

I, KONRAD SCHAFFLER-GLÖSSL, of 138, Lerchenfelderstrasse, Vienna, VIII, Austria, an Austrian citizen, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to a touch-pill for electric time fuses and consists in providing the pill with a surface coating consisting of a mixture of a metal powder, for instance, magnesium or zirconium, with an oxygen carrier for the purpose of obtaining a strong and hot flame during the last stage of combustion of the pill.

In order to increase the combustion temperature as much as possible during the combustion of the touch-pill, which is ignited by means of a fuse wire, and thus to ensure a safe ignition of the retarding charge, it has previously been proposed to coat the pill by dipping it in a second, suitable priming composition. Particularly pills having a combustible body composed for instance, of acetylene-copper, have been coated with a mixture of potassium chlorate and powdered charcoal in order to obtain an intensive ignition flame.

According to the invention a mixture of a metal powder and an oxygen carrier, for instance potassium chlorate, is employed for the coating of the pill, such mixture being particularly suitable for the purpose.

As an example, the core of the pill may be composed of acetylene copper, and the coating may be composed of 10 parts by weight of zirconium, 10 parts potassium chlorate and 0.4 parts aluminium powder.

It is already known to form the touch-pill itself from combustible material consisting of a metal powder and a substance

capable of giving off oxygen, for the purpose of obtaining a combustion which is free, or nearly so, from the development of combustion gases.

In providing a touch-pill with a coating composed of a mixture of a metal powder and an oxygen carrier, according to the invention, the object is, on the contrary, and as already stated, merely to obtain increased combustion temperature at the last stage of combustion of the pill, and it is of no importance for the technical effect whether the additional products of combustion obtained from the coating are gaseous or solid. Besides, the gases produced by the combustion of the thin coating will add very little to the quantity of gas produced by the touch-pill itself.

The drawing illustrates the subject matter of the invention by a longitudinal section of the fuse.

The touch-pill 3 used for igniting the retarding charge 1 of the fuse 2 is provided according to the invention with a thin coating 4 composed of a mixture of a metal powder and an oxygen carrier.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

A touch-pill for electric time fuses, characterized by the feature that the surface of the pill is provided with a coating composed of a mixture of a metal powder, for instance zirconium or magnesium with an oxygen carrier, for the purpose of obtaining a strong and hot flame at the last stage of combustion of the pill.

Dated the 3rd day of February, 1933.

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[This Drawing is a full-size reproduction of the Original.]

